

Emissions of Greenhouse Gases in the United States 2004

Report #: DOE/EIA-0573(2004)

Released Date: December 2005

Next Release Date: December 2006

Table 16. U.S. Methane Emissions from Coal Mining and Post-Mining Activities, 1990 and 1996-2004

Source	1990	1996	1997	1998	1999	2000	2001	2002	2003	P2004
Million Metric Tons Carbon Dioxide Equivalent										
Surface Mining										
Mining.....	9.8	10.6	10.9	11.4	11.5	11.4	12.1	12.0	11.7	11.9
Post-Mining	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.0	1.0	1.0
<i>Subtotal</i>	<i>10.7</i>	<i>11.5</i>	<i>11.8</i>	<i>12.4</i>	<i>12.5</i>	<i>12.4</i>	<i>13.2</i>	<i>13.0</i>	<i>12.7</i>	<i>13.0</i>
Underground Mining										
Ventilation (Gassy Mines) ^a	48.9	39.3	41.2	41.5	40.6	38.3	37.2	34.7	33.4	36.1
Ventilation (Nongassy Mines).....	0.6	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.8	0.8
Degasification Systems	28.9	23.5	24.4	21.8	18.1	20.0	21.3	22.9	24.6	20.4
Post-Mining	14.7	14.2	14.6	14.5	13.6	12.9	13.2	12.4	12.2	13.0
Methane Recovery for Energy (-)...	6.1	16.0	12.5	15.5	13.9	16.0	17.7	19.1	16.5	15.2
<i>Subtotal</i>	<i>87.0</i>	<i>61.9</i>	<i>68.6</i>	<i>63.2</i>	<i>59.2</i>	<i>56.1</i>	<i>54.8</i>	<i>51.7</i>	<i>54.5</i>	<i>55.2</i>
Net Emissions	97.7	73.4	80.4	75.6	71.7	68.5	68.0	64.7	67.2	68.2
Million Metric Tons Methane										
Surface Mining										
Mining.....	0.43	0.46	0.47	0.49	0.50	0.49	0.53	0.52	0.51	0.52
Post-Mining	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.04	0.05
<i>Subtotal</i>	<i>0.46</i>	<i>0.50</i>	<i>0.51</i>	<i>0.54</i>	<i>0.54</i>	<i>0.54</i>	<i>0.57</i>	<i>0.57</i>	<i>0.55</i>	<i>0.56</i>
Underground Mining										
Ventilation (Gassy Mines) ^a	2.13	1.71	1.79	1.80	1.76	1.67	1.62	1.51	1.45	1.57
Ventilation (Nongassy Mines).....	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.04
Degasification Systems	1.26	1.02	1.06	0.95	0.79	0.87	0.93	1.00	1.07	0.89
Post-Mining	0.64	0.62	0.63	0.63	0.59	0.56	0.57	0.54	0.53	0.57
Methane Recovery for Energy (-)...	0.26	0.69	0.54	0.67	0.60	0.70	0.77	0.83	0.72	0.66
<i>Subtotal</i>	<i>3.78</i>	<i>2.69</i>	<i>2.98</i>	<i>2.75</i>	<i>2.57</i>	<i>2.44</i>	<i>2.38</i>	<i>2.25</i>	<i>2.37</i>	<i>2.40</i>
Net Emissions	4.25	3.19	3.50	3.29	3.12	2.98	2.96	2.81	2.92	2.96

^aA "gassy" mine is an underground mine with ventilation emissions of 100,000 cubic feet of methane or more per day, as measured by the U.S. Mine Safety and Health Administration.

P = preliminary data.

Notes: Data in this table are revised from the data contained in the previous EIA report, *Emissions of Greenhouse Gases in the United States 2003*, DOE/EIA-0573(2003) (Washington, DC, December 2004). Totals may not equal sum of components due to independent rounding.

Sources: Coal production numbers from Energy Information Administration, *Coal Production*, DOE/EIA-0118 (Washington, DC, various years), and *Coal Industry Annual*, DOE/EIA-0584 (Washington, DC, various years). Methane recovery rates from U.S. Environmental Protection Agency, Office of Air and Radiation, Non-CO₂ Gases and Sequestration Branch, Coalbed Methane Outreach Program. Ventilation data for 1985, 1988, and 1990 provided by G. Finfinger, U.S. Department of the Interior, Bureau of Mines, Pittsburgh Research Center. Ventilation data for all other years provided by U.S. Environmental Protection Agency, Office of Air and Radiation, Non-CO₂ Gases and Sequestration Branch, Coalbed Methane Outreach Program.